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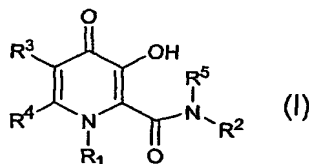
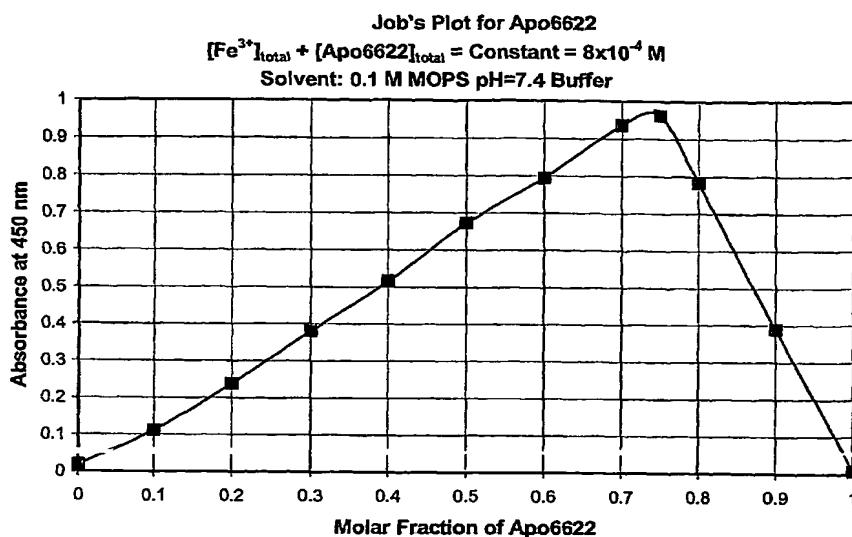
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(54) Title: CYCLOALKYL DERIVATIVES OF 3-HYDROXY-4-PYRIDINONES



(57) Abstract: The present invention provides an cycloalkyl derivative of 3-hydroxy-4-pyridinone which is useful for the chelation of metal ions such as iron. Its preparation and use is described. In particular, the invention concerns the removal of iron in chemical and biological systems including chelating agents having the formula (I); wherein R<sup>1</sup> is X with the proviso that R<sup>2</sup> is Y; or R<sup>1</sup> is T with the proviso that R<sup>2</sup> is W; or R<sup>1</sup> is X with the proviso that R<sup>2</sup> R<sup>5</sup> N when taken together form a heterocyclic ring selected from piperidinyl, morpholinyl, pyrrolidinyl or piperazinyl, wherein the group piperidinyl, morpholinyl, pyrrolidinyl or piperazinyl is either unsubstituted or substituted with one to three C<sub>1</sub> to C<sub>6</sub> alkyl groups. X is C<sub>3</sub>-C<sub>6</sub> cycloalkyl; Y is selected from the group consisting of C<sub>1</sub> to C<sub>6</sub> cycloalkyl; C<sub>1</sub> to C<sub>6</sub> alkyl, and C<sub>1</sub> to C<sub>6</sub> alkyl monosubstituted with a C<sub>3</sub>-C<sub>6</sub> cycloalkyl; T is C<sub>1</sub> to C<sub>6</sub> alkyl; W is C<sub>3</sub>-C<sub>6</sub> cycloalkyl; R<sup>3</sup> is selected from the group consisting of hydrogen and C<sub>1</sub> to C<sub>6</sub> alkyl; R<sup>4</sup> is selected from the group consisting

of hydrogen and C<sub>1</sub> to C<sub>6</sub> alkyl; R<sup>5</sup> is selected from the group consisting of hydrogen and C<sub>1</sub> to C<sub>6</sub> alkyl; and its pharmaceutically acceptable salt thereof. Pharmaceutical compositions of such compounds are useful in the removal of excess body iron from patients with iron overload diseases.



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**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,*

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